

Comparisons of Job Characteristics

Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)

Associated Occupation: Environmental Scientists and Specialists, Including Health (19-2041)

Compare Knowledge

Compare Skills

Compare Abilities

Compare Detailed Work Activities

Compare Tools and Technologies

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 61

Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)

Associated Occupation: Environmental Scientists and Specialists, Including Health (19-2041)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mathematics	9.2	15.5	15.1	0	Current knowledge level may be sufficient
Chemistry	4.8	14.9	13.0	<	Expanded education and/or training may be required
Biology	3.7	14.8	6.2	<<	Extensive education and/or training may be required
Law and Government	5.9	13.5	12.4	0	Current knowledge level may be sufficient
Geography	3.9	12.7	4.0	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	12.1	18.9	>>	Current knowledge level is likely more than sufficient
Physics	4.3	10.5	14.1	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 93

Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)

Associated Occupation: Environmental Scientists and Specialists, Including Health (19-2041)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Reading Comprehension	10.7	16.1	14.8	0	Current skill level may be sufficient
Science	4.5	15.7	12.4	<<	Extensive development of skills in this area may be required
Writing	9.2	14.4	12.9	<	A higher skill level may be required

Complex Problem Solving	9.1	13.4	11.8	<	A higher skill level may be required
Judgment and Decision Making	9.4	13.1	12.0	0	Current skill level may be sufficient
Active Learning	8.7	13.0	12.0	0	Current skill level may be sufficient
Mathematics	6.2	12.2	8.6	<<	Extensive development of skills in this area may be required
Coordination	9.1	11.8	9.8	<	A higher skill level may be required
Learning Strategies	7.2	11.7	9.7	<	A higher skill level may be required
Systems Analysis	6.5	10.6	10.6	0	Current skill level may be sufficient
Operations Analysis	5.0	9.3	11.0	>	Skill level is likely sufficient
Programming	2.2	6.3	3.5	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 96

Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)

Associated Occupation: Environmental Scientists and Specialists, Including Health (19-2041)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Inductive Reasoning	10.2	16.5	14.3	<	Some improvement in abilities may be required
Written Comprehension	11.0	16.3	14.1	<	Some improvement in abilities may be required
Problem Sensitivity	11.1	15.8	15.3	0	Current ability level may be sufficient
Deductive Reasoning	10.6	15.1	14.1	0	Current ability level may be sufficient
Written Expression	9.8	14.4	13.4	0	Current ability level may be sufficient
Category Flexibility	9.0	13.0	11.0	<	Some improvement in abilities may be required
Information Ordering	9.9	12.9	11.9	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	12.2	8.7	<<	Extensive improvement in abilities may be required
Number Facility	6.3	11.9	7.5	<<	Extensive improvement in abilities may be required
Flexibility of Closure	7.8	11.6	10.9	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 76

Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)

Associated Occupation: Environmental Scientists and Specialists, Including Health (19-2041)

Work Activities	Exclusivity of Activity
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Adhere to safety procedures	12
Collect scientific or technical data	30
Communicate technical information	4
Develop plans for programs or projects	31
Direct and coordinate activities of workers or staff	3
Evaluate manufacturing or processing systems	68
Explain complex mathematical information	30
Follow safe waste disposal procedures	50
Inspect facilities or equipment for regulatory compliance	51
Make presentations	13
Perform safety inspections in industrial, manufacturing or repair setting	32
Prepare safety reports	60
Prepare technical reports or related documentation	22
Recommend action to ensure compliance	73
Record test results, test procedures, or inspection data	48
Resolve engineering or science problems	46
Test air quality, noise, temperature, or radiation	82
Use chemical testing or analysis procedures	54
Use government regulations	44
Use hazardous materials information	35
Use knowledge of materials testing procedures	70
Use mathematical or statistical methods to identify or analyze problems	30
Use pollution control techniques	62
Use scientific research methodology	21

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 77

Focus Occupation: Health and Safety Engineers, Except Mining Safety Engineers and Inspectors (17-2111)
Associated Occupation: Environmental Scientists and Specialists, Including Health (19-2041)

Tools and Technologies	Exclusivity
Business function specific software	1
Cameras	2
Chemical evaluation instruments and supplies	10
Computer data input devices	2
Computers	1
Content authoring and editing software	1
Content management software	6
Data management and query software	1
Development software	4
Electrical measuring and testing equipment	7
Electrochemical measuring instruments and accessories	9
Fluid mechanics equipment	11

Gas analyzers and monitors	10
Indicating and recording instruments	2
Industry specific software	1
Information exchange software	1
Light and wave generating and measuring equipment	4
Liquid and gas flow measuring and observing instruments	15
Liquid and solid and elemental analyzers	19
Non destructive examination equipment	13
Operating environment software	12
Sampling equipment	12
Sound generating and measuring equipment	19
Spectroscopic equipment	10
Transducers	23

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.